



## IMPLEMENTATION PLAN

The preceding chapters present a description of the short- and long-term development projects necessary to accommodate the forecast aviation needs at Tucson International Airport (TIA) over the next 20 years. The purpose of this chapter is to assess the financial implications of undertaking these proposed projects and proposes a financial plan that identifies potential sources of funds that may be available to cover the costs of these projects.

The first section of this chapter presents the Master Plan and other associated projects the Airport intends to implement over the next 20 years, including preliminary cost estimates for these projects. The second section of this chapter presents how the phasing of future projects were determined and the third section presents the resulting financial plan.

### 1. Master Plan and Associated Projects & Cost Estimates

In practice, Airport projects will be undertaken when demand warrants, rather than in accordance with a projected schedule developed in advance. Factors that can trigger the need to proceed with a particular Airport development project can range from tenant demands for landside and support facilities to airside and terminal capacity requirements. The need for each development project will materialize as the associated demand level (that triggers expansion) increases. Therefore, the recommended Master Plan projects have been grouped by Planning Demand Levels (PDL) to indicate the Airport activity level, which triggers the need for improvement.

The Master Plan Projects are divided into four PDLs. Implementation of each PDL is intended to be “phased-in”, as pre-designated capacity levels are reached. PDL 1 projects are planned to occur between 2005 and 2009, and will meet the immediate needs of the airport. Projects grouped in PDLs 2-4 are crucial to the overall development of the Airport, however are not anticipated to be needed within the next five years. To address the short-term needs of the Airport, project phasing by year, over the next five years, was developed for PDL 1 projects. The projects beyond PDL 1 are not phased by year, but rather grouped together within a relative timeframe.

#### 1.1 Project List

**Table 7-1** lists all the Master Plan projects and the preliminary cost estimates for each of these projects, categorized by PDL. Within each PDL designation, projects are divided into the following categories: Airfield Projects, Terminal Projects, Landside Projects, Ancillary Facility Projects, Land Acquisition Projects, and Related Studies Projects.



**Table 7-1**  
**Master Plan Update Project List**  
**(1 of 4)**

<b>PDL 1</b>		<b>Funding Source</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
<b>Airfield Projects</b>								
Electrical Upgrades (11R-29L)	ADOT			\$1,037,500				
Reconstruct Runway 11L-29R (Design)	AIP/ADOT			\$785,200				
Reconstruct Runway 11L-29R (Construction)	AIP/ADOT				\$9,000,042			
Taxiway G – Phase I	AIP/ADOT				\$907,500			
Runway 11R-29L Relocation (Design)	FAA LOI						\$10,520,000	
Runway 11R-29L Relocation (Construction)	FAA LOI							\$52,080,000
Raytheon Facilities Relocation	Tenant							TBD
Reconstruct Raytheon Cargo Pad	Tenant							\$880,000
Expand Main Terminal Apron	AIP/ADOT				\$8,281,500			
Reconstruct Main Terminal Apron	AIP/ADOT					\$4,236,189	\$4,257,428	\$4,265,764
Taxiway E (funded by AANG)	AANG				\$0			
<b>Airfield Totals:</b>			<b>\$0</b>	<b>\$1,822,700</b>	<b>\$18,189,042</b>	<b>\$4,236,189</b>	<b>\$14,777,428</b>	<b>\$57,225,764</b>
<b>Terminal Projects</b>								
Concourse Expansion – Programming	PFC & Bond		\$753,695					
Concourse Expansion Phase I	PFC & Bond			\$60,000,000				
<b>Terminal Totals:</b>			<b>\$753,695</b>	<b>\$60,000,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Landside Projects</b>								
Upgrade Perimeter Road from TWY D3 to TWY A13	AIP/ADOT					\$407,500		
<b>Landside Totals:</b>			<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$407,500</b>	<b>\$0</b>	<b>\$0</b>
<b>Ancillary Facility Projects</b>								
Airfield Maintenance Facility (Design)	TAA		\$1,300,000					
Airfield Maintenance Facility (Construction)	TAA			\$7,000,000				
Aircraft Maintenance/Industrial Site – Infrastructure and Utilities	TAA					\$4,480,100		
New Roadway and Fencing in run up area	ADOT				\$516,749			
Perimeter Security Fencing for Acquisitions	TAA					\$45,000		
Perimeter Security Fencing for Acquisitions	AIP/ADOT			\$371,200				
Airfield Drainage Improvements	TAA						\$155,000	
Corporate/GA Development (Infrastructure & Utilities) - Constr.	ADOT						\$1,200,000	
Demolish Existing Maintenance Facilities	TAA						\$230,000	
Aero Park Blvd - Utilities	ADOT					\$942,700		
Aero Park Blvd - roadway,demo,grading	AIP/ADOT					\$282,900		
<b>Ancillary Totals:</b>			<b>\$1,300,000</b>	<b>\$7,371,200</b>	<b>\$516,749</b>	<b>\$5,750,700</b>	<b>\$1,585,000</b>	<b>\$0</b>
<b>Land Acquisitions</b>								
Raytheon Property	AIP/ADOT	Funded						
Obedin	AIP/ADOT			\$760,000				
Parcel at Alvernon Way and Los Reales Rd.	ADOT				\$525,000			
Burboa	ADOT							\$1,200,000
Section 27 Parcel	AIP/ADOT	Funded			\$1,500,000			
<b>Land Acquisition Totals:</b>				<b>\$760,000</b>	<b>\$2,025,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,200,000</b>
<b>Related Studies</b>								
EIS for Relocated Runway 11R-29L	AIP/ADOT	Funded						
EIS Phase II - Airspace Analysis Included	AIP/ADOT			\$800,000				
Navajids Assessment	AIP/ADOT			\$30,000				
Update Part 150 Program	AIP/ADOT						\$750,000	
<b>Related Studies Totals:</b>				<b>\$830,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$750,000</b>	<b>\$0</b>
<b>PDL 1 Totals:</b>			<b>\$2,053,695</b>	<b>\$70,783,900</b>	<b>\$20,730,791</b>	<b>\$10,394,389</b>	<b>\$17,112,428</b>	<b>\$58,425,764</b>



**Table 7-1**  
**Master Plan Update Project List**  
(2 of 4)

<b>PDL 2</b>	<b>Project Total</b>
<b>Airfield Projects</b>	
Taxiway B Extension (Design)	\$330,000
Taxiway B Extension (Construction)	\$1,900,000
Service Road Realignment - east end of runways	\$1,560,000
Reconstruct Main Terminal Apron (2010 - 2013)	\$23,212,992
Taxiway G – Phase II (Design)	\$420,000
Taxiway G – Phase II (Construction)	\$2,330,000
Taxiway C A5 to A8 (Design)	\$600,000
Taxiway C A5 to A8 (Construction)	\$3,460,000
High Speed Exit A11 at 11L (Design)	\$270,000
High Speed Exit A11 at 11L (Construction)	\$1,940,000
Taxiway C A8 to A11 (Design)	\$670,000
Taxiway C A8 to A11 (Construction)	\$3,840,000
Taxiway B - Extension to Taxiway D (Design)	\$240,000
Taxiway B - Extension to Taxiway D (Construction)	\$1,400,000
<b>Airfield Totals:</b>	<b>\$42,172,992</b>
<b>Terminal Projects</b>	
Terminal Parking Garage	\$22,000,000
Concourse Expansion - Phase II	\$30,000,000
<b>Terminal Totals:</b>	<b>\$30,000,000</b>
<b>Landside Projects</b>	
RAC Storage Area	\$700,000
Park Ave Improvements	\$106,200
Country Club Rd Extension	\$780,000
<b>Landside Totals:</b>	<b>\$1,586,200</b>
<b>Ancillary Facility Projects</b>	
West Ramp Clear Zone area Demolition	\$2,340,000
Corporate/GA Area B - Infrastructure and Utilities	\$1,200,000
Site Demolition/GA Area B (Plumer Properties)	\$100,000
New Cargo - Infrastructure and Utilities	\$1,600,000
Pipeline to Ajo/Alvernon Storage	\$0
Airfield Watershed Basin	\$300,000
Fuel Farm	\$24,000,000
Abandon Fuel Farms C & D	\$500,000
TSA Office Building	\$0
Public Safety / Administration Building	\$8,000,000
Convert International Building to Office	\$2,340,000
Perimeter Fencing for Acquisitions	\$33,200
<b>Ancillary Totals:</b>	<b>\$40,413,200</b>
<b>Land Acquisition</b>	
Texas Instruments	\$860,000
Parcel at Old Vail and Swan (Sunshine Assoc.)	\$25,000
<b>Land Acquisition Total:</b>	<b>\$885,000</b>
<b>Related Studies</b>	
Security Master Plan Update	\$100,000
Bomb Incident Prevention Plan Update	\$100,000
<b>Related Studies Totals:</b>	<b>\$200,000</b>
<b>PDL 2 Totals:</b>	<b>\$115,257,392</b>



**Table 7-1**  
**Master Plan Update Project List**  
**(3 of 4)**

<b>PDL 3</b>	<b>Project Total</b>
<b>Airfield Projects</b>	
Taxiway G – Phase III (Design)	\$420,000
Taxiway G – Phase III (Construction)	\$2,330,000
High Speed Exit A15 at 11L (Design)	\$280,000
High Speed Exit A15 at 11L (Construction)	\$1,590,000
High Speed Runway Exit 3-21 (Design)	\$350,000
High Speed Runway Exit 3-21 (Construction)	\$1,940,000
Cargo Apron	\$4,460,000
Aircraft Maintenance Apron - Phase II	\$2,830,000
<b>Airfield Totals:</b>	<b>\$14,200,000</b>
<b>Terminal Projects</b>	
Concourse Expansion – Phase III	\$40,000,000
<b>Terminal Totals:</b>	<b>\$40,000,000</b>
<b>Ancillary Facility Projects</b>	
Hydrant Feederline to Air Freight Apron	\$1,710,000
Demolish Existing Fuel Farm	\$730,000
Aircraft Maintenance Facility Expansion	\$1,000,000
Perimeter Fencing for Acquisitions	\$36,800
<b>Ancillary Totals:</b>	<b>\$3,476,800</b>
<b>Land Acquisition</b>	
Section 34 (Noise) (Calmat)	\$800,000
Section 35 (Noise) (Granite)	\$1,300,000
Parcel at Alvernon Way and Corona Rd	\$2,500,000
<b>Land Acquisition Totals:</b>	<b>\$4,600,000</b>
<b>PDL 3 Totals:</b>	<b>\$62,276,800</b>
<b>PDL 4</b>	<b>Project Total</b>
<b>Airfield Projects</b>	
Taxiway G – Phase IV (Design)	\$420,000
Taxiway G – Phase IV (Construction)	\$2,330,000
<b>Airfield Totals:</b>	<b>\$2,750,000</b>
<b>Landside Projects</b>	
Park N Save Expansion	\$1,960,000
<b>Landside Totals:</b>	<b>\$1,960,000</b>
<b>Ancillary Facility Projects</b>	
Ground Cargo Infrastructure	\$3,060,000
Aircraft Maintenance Facility Expansion	\$3,890,000
Maintenance Facility Expansion	\$3,000,000
<b>Ancillary Totals:</b>	<b>\$9,950,000</b>
<b>Land Acquisition</b>	
Parcel at Swan and Herman Roads (City of Tucson)	\$800,000
Parcel at Alvernon Way and Hermans Rd. (Griggs/Amcron)	\$300,000
Parcel at Alvernon Way and Hughes Access Rd. (Hughes/AAA)	\$1,500,000
<b>Land Acquisition Totals:</b>	<b>\$2,600,000</b>
<b>PDL 4 Totals:</b>	<b>\$17,260,000</b>



**Table 7-1**  
**Master Plan Update Project List**  
**(4 of 4)**

<b>Beyond Planning Horizon</b>	<b>Project Total</b>
<b>Airfield Projects</b>	
North Parallel Runway and associated Taxiways Taxiway F	
<b>Airfield Totals:</b>	<b>\$0</b>
<b>Terminal Projects</b>	
Existing Terminal Expansion or Potential Mid-field Development	
<b>Terminal Totals:</b>	<b>\$0</b>
<b>Landside Projects</b>	
Parking Expansion RAC Storage Area Expansion Potential Light Rail Spur Relocate Alvernon Way (Pima County)	
<b>Landside Totals:</b>	<b>\$0</b>
<b>Ancillary Facility Projects</b>	
Cargo Expansion Airfield and Aircraft Maintenance Expansion Detention Basin – Airport Wash Detention Basin – Hughes	
<b>Ancillary Totals:</b>	<b>\$0</b>
<b>Land Acquisition</b>	
Tucson Blvd Properties	
<b>Land Acquisition Totals:</b>	<b>\$0</b>
<b>Beyond Planning Horizon Totals:</b>	<b>\$0</b>



## 1.2 Project Cost Estimates

The cost estimates for the Master Plan projects come from a variety of sources and are conceptual in nature. The costs for the projects identified by the Master Planning process have been estimated as part of the process. These numbers include percentages for design, escalation (for PDL 1 project only) and contingencies. The other projects and associated costs have been part of the Airport's overall development plan for some time. The need for these other projects has been confirmed by the Master Plan and the estimated costs for these projects have been included in this analysis.

## 2. **Project Phasing**

The decision to group a project in a particular PDL was based on the existing and anticipated facility needs of the Airport, and to balance these needs with the Airport's overall financial picture. PDL 1 projects have been phased in such a way to be financially feasible while allowing for timely completion of these projects, as many respond to an existing need at the Airport today.

### 2.1 PDL 1

The phasing for projects to be implemented over the next 5 years has been broken down by year, as shown in Table 7-1. Some of the projects are needed for on-going improvements at the Airport, while other projects will add capacity to existing Airport functions. The airfield projects in PDL 1 include the reconstruction of Runway 11L-29R and updates to the electrical lighting system on existing Runway 11R-29L. A portion of Taxiway 'G' will be constructed to serve the proposed aircraft maintenance area and Taxiway 'E' will be constructed by Arizona Air National Guard (AANG) to reduce taxiway congestion near the AANG facilities and the General Aviation (GA) area.

A relocation of Runway 11R-29L is part of the Airport's overall development plan for PDL 1. In order to accomplish the runway relocation (moving the runway approximately 450' south of its existing centerline), a number of projects will need to be undertaken in PDL 1. These projects include facility relocations/demolition and design for the relocated Runway 11R-29L. In addition to the physical projects required to create the space for the future relocation of Runway 11R-29L, PDL 1 will include an Environmental Impact Statement (EIS), airspace analysis, a Part 150 study, and an assessment of NAVAIDs that will be required prior to construction of the project.



The concourse expansion project is intended to be completed during PDL 1 and will include programming, design, and construction. If it's determined the FIS facility is to be relocated, the FIS project will occur in PDL 2 or PDL 3.

Other projects included in the first five years of the Airport's development plan (to address current capacity shortfalls) include a new Airport Maintenance Facility for TAA's use, site development for future Aircraft Maintenance Facilities (to be built and operated by others), site development for Corporate/GA Facilities (to be built and operated by others). In addition, upgrades will be made to airfield drainage and service roads. **Exhibit 7-1** shows all of the projects that are planned for construction during PDL 1.

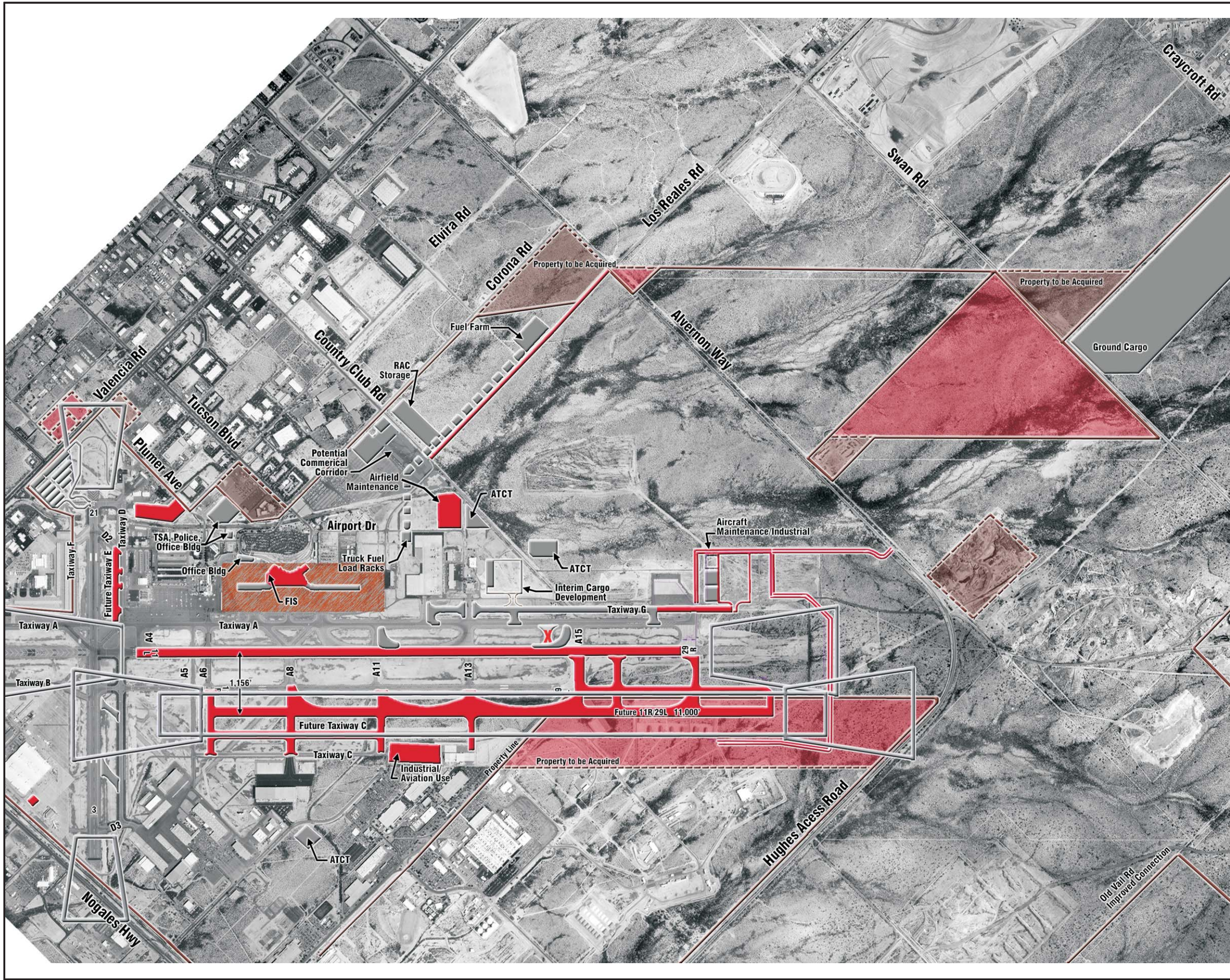
Exhibit 7-1 also depicts five parcels that will be acquired through the Airports on-going land acquisition program during this planning horizon.

## 2.2 PDL 2

The airfield projects in PDL 2 include a southeast extension of Taxiway 'B' to run the full length of the relocated runway and a northwest extension of Taxiway 'B' to connect to the west ramp area. Taxiway 'C', south of the relocated runway, will be reconstructed during PDL 2 to provide another parallel taxiway and to serve the facilities on the south side of the Airport. Other taxiway improvements include Phase II of Taxiway 'G', to support the existing cargo area as traffic grows and a high speed runway exit for existing Runway 11L-29R.

Should the existing FIS facilities which are currently located in a stand-alone building be incorporated into the main terminal/concourse building at TIA, it is anticipated that this would occur in PDL 2. Relocation would make the stand-alone International Terminal available for conversion to an office building later in PDL 2. To address the need for additional parking near the terminal, a parking structure is currently under consideration by TAA; it would increase the number of short and long term parking spaces at the Airport. Landside projects during this period include an extension of Country Club Road, to serve the existing and future Cargo Facilities, and the development of the RAC Storage Area, which will open additional space for office development near the existing TAA Administration Buildings. Office space projects during PDL 2 are intended for the TSA, Airport Police and Airport Administration.





## TUCSON INTERNATIONAL AIRPORT Master Plan Update

- Under Construction**
  - Electrical Upgrades (11R-29L)
  - Reconstruct Runway 11L-29R
  - Runway 11R-29L Relocation (Design & Construction)
  - Taxiway G – Phase 1
  - Raytheon Facilities Relocation
  - Demolish/Reconstruct Raytheon Cargo Pad
  - Taxiway E (funded by AANG)
  - Concourse Expansion – Programming
  - Concourse Expansion – Design
  - Concourse Expansion – Construction
  - Upgrade Perimeter Road from TWY D3 to Raytheon
  - Airfield Maintenance Facility
  - Aircraft Maintenance/Industrial Site – Infrastructure and Utilities
  - Aircraft Maintenance Facility Apron - Phase I
  - Perimeter Security Fencing for Acquisitions
  - Airfield Drainage Improvements
  - Corporate/GA Development (Infrastructure & Utilities) - Construction
  - Demolish Existing Maintenance Facilities
  - GA Consolidated Fueling Facility - Infrastructure
  - Service Road Re-alignment – east end of runways
  - Expand Main Terminal Apron
  - Reconstruct Main Terminal Apron
  - Aeropark Blvd Development
    - Roadway Demolition, Grading
    - Aeropark Blvd Development
    - Utilities
- Impacted Facilities**
  - Runway 11L-29R
  - Runway 11R-29L
  - Raytheon Facilities
  - Concourse Facilities
- Land Acquisitions**
  - Raytheon Property
  - Obedin
  - Section 27 Parcel
  - Parcel at Alvernon Way and Los Reales Rd
  - Burboa
- Related Studies**
  - EIS for Relocated Runway 11R-29L
  - EIS Phase II - Airspace Analysis Included
  - Navajos Assessment
  - GA Strategic Plan Update
  - Update Part 150 Program
- Completed Projects**

**PDL 1**  
**Operations: 286,000**  
**Enplanements: 2.1 Million**  
**Range: 2004-2009**







Ancillary facility projects during PDL 2 include demolition and site preparation for new GA and other corporate aviation uses in the northern section of the Airport. The proposed fuel farm to enhance the fuel storage capacity is planned for construction during PDL 2. A pipeline will be provided to serve the new fuel farm from the off-site fuel terminal at Ajo and Alvernon. This project will eliminate truck traffic between the off-site terminal and the Airport. A detention basin will be needed during this period to support the additional airfield pavement associated with the new runway. Facilities in the west ramp area, in the extended clear zone of the new runway, will be demolished to meet the Airport's Clear Zone Policy (see Appendix A).

Other projects at the Airport during this time will include the acquisition of two parcels, part of the Airport's on-going land acquisition program, and updates to Airport safety and security studies. **Exhibit 7-2** shows all of the projects that are planned for construction during PDL 2.

### 2.3 PDL 3

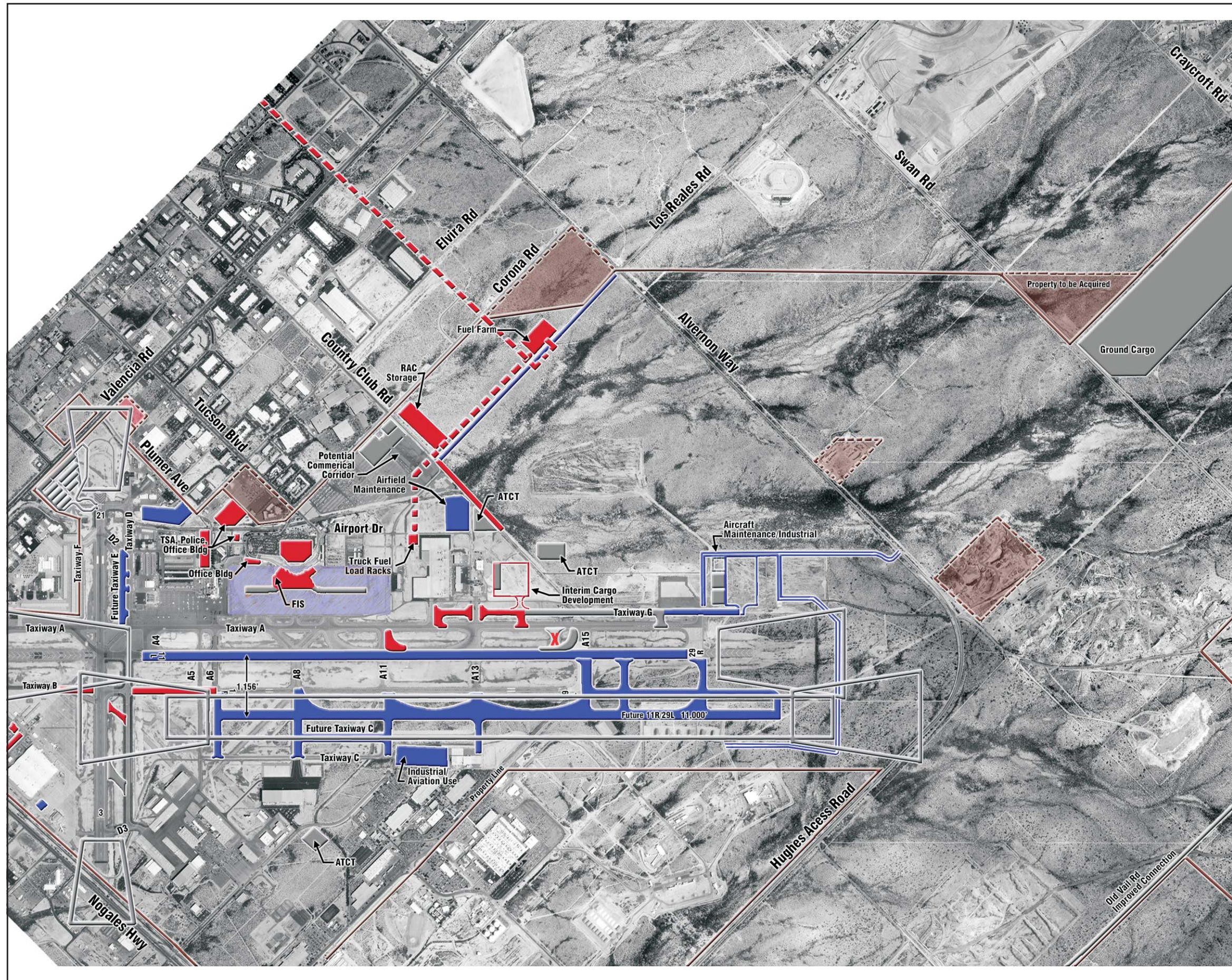
The airfield projects in PDL 3 are limited to taxiway and apron projects. Phase III of Taxiway 'G' would be constructed during this time frame, the completion of this taxiway, parallel to Taxiway 'A', will provide flexibility for aircraft movement between the airfield system and the Terminal, Cargo, and Aircraft Maintenance Areas. High speed runway exits would also be constructed during this timeframe, one at existing Taxiway 'A15' which would eliminate Taxiway 'A14', and one serving the traffic on Runway 3-21.

As previously mentioned, during PDL 1, the infrastructure and site utilities are to be developed for the Aircraft Maintenance Area (to be built and operated by others) on the east side of the Airport. PDL 3 includes a project to construct phase II of this apron project and complete build-out of this site. To support expansion of the Cargo Facilities at TIA, a new cargo apron would be constructed just east of the existing Cargo Area. These apron projects would be constructed to accommodate growth of existing tenants or for new Airport tenants.

The Terminal project in PDL 3 is Phase III of the concourse expansion. PDL 3 is considered the most appropriate timeframe for this third phase to occur.

Ancillary facility projects during PDL 3 include demolition of the existing Fuel Farm, which will support concourse expansion, and hydrant fuel lines to the cargo apron. PDL 3 includes 3 land acquisitions, two off-airport for noise purposes, and a parcel at Alvernon Way and Corona Road. **Exhibit 7-3** shows all of the projects that are planned for construction during PDL 3.





## TUCSON INTERNATIONAL AIRPORT Master Plan Update

### Under Construction

- Taxiway B Extension
- Taxiway G – Phase II
- Taxiway C A5 to A8
- High Speed Exit A11 at 11L
- Taxiway C A8 to A11
- Taxiway B - Extension to Taxiway D
- Concourse Expansion - Phase II
- RAC Storage Area
- Country Club Road Extension
- West Ramp Clear Zone area Demolition
- Corporate/GA Area B - Infrastructure and Utilities
- Site Demolition/GA Area B (Plumer Properties)
- Fuel Farm
- Pipeline to Ajo/Alvernon Storage
- Airfield Watershed Basin
- Abandon Fuel Farms C & D
- TSA Office Building
- Police and Administration Building
- Convert International Building to Office
- Perimeter Fencing for Acquisitions
- Terminal Parking Garage
- Reconstruct Main Terminal Apron
- New Cargo Infrastructure and Utilities

### Impacted Facilities

- Concourse Facilities
- Existing International Terminal
- West Ramp Facilities

### Land Acquisition

- Texas Instruments
- Parcel at Old Vail and Swan (Sunshine Assoc.)

### Related Studies

- Security Master Plan Update
- Bomb Incident Prevention Plan Update

### Completed Projects



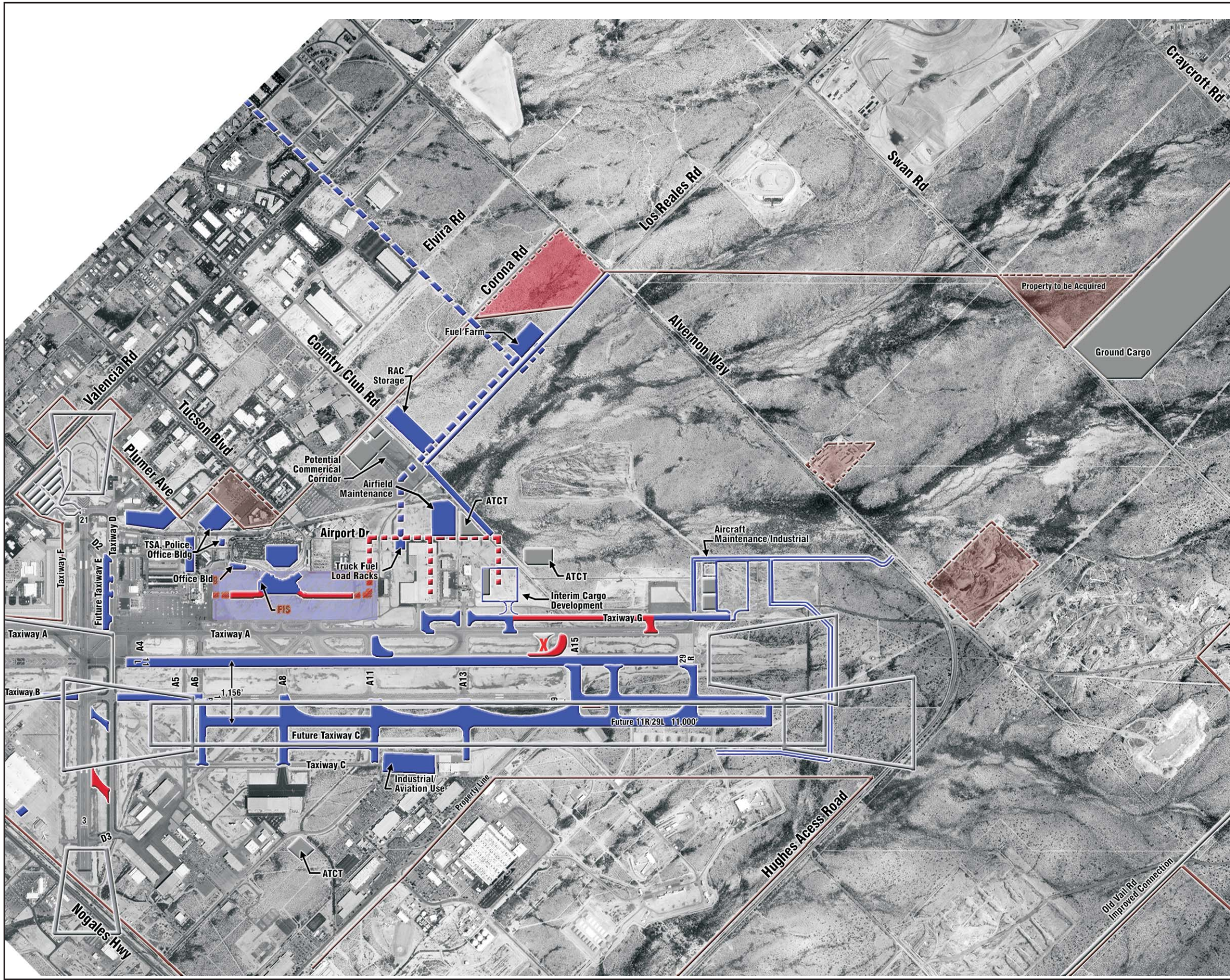
**PDL 2**  
Operations: 298,000  
Enplanements: 2.4 Million  
Range: 2010-2013



Landrum & Brown

EXHIBIT  
7-2





## TUCSON INTERNATIONAL AIRPORT Master Plan Update

### Under Construction

- Taxiway G – Phase III
- High Speed Exit A15 at 11L
- High Speed Runway Exit 3-21
- Cargo Apron
- Aircraft Maintenance Apron - Phase II
- Concourse Expansion – Phase III
- Hydrant Feederline to Air Freight Apron
- Demolish Existing Fuel Farm
- Aircraft Maintenance Facility Expansion
- Perimeter Fencing for Acquisitions

### Impacted Facilities

- Existing Fuel Farm

### Land Acquisition

- Section 34 (Noise) (Calmat)
- Section 35 (Noise) (Granite)
- Parcel at Alvernon Way and Corona Rd

### Completed Projects

**PDL 3**  
Operations: 306,000  
Enplanements: 2.6 Million  
Range: 2013-2018



EXHIBIT  
7-3





## 2.4 PDL 4

The construction of Taxiway 'G' has been broken into four phases to provide the additional taxiway circulation space in the areas most needed at a particular point in time. PDL 4 includes the fourth phase of this taxiway construction. This taxiway will support growth in the aircraft maintenance area in this planning horizon and beyond.

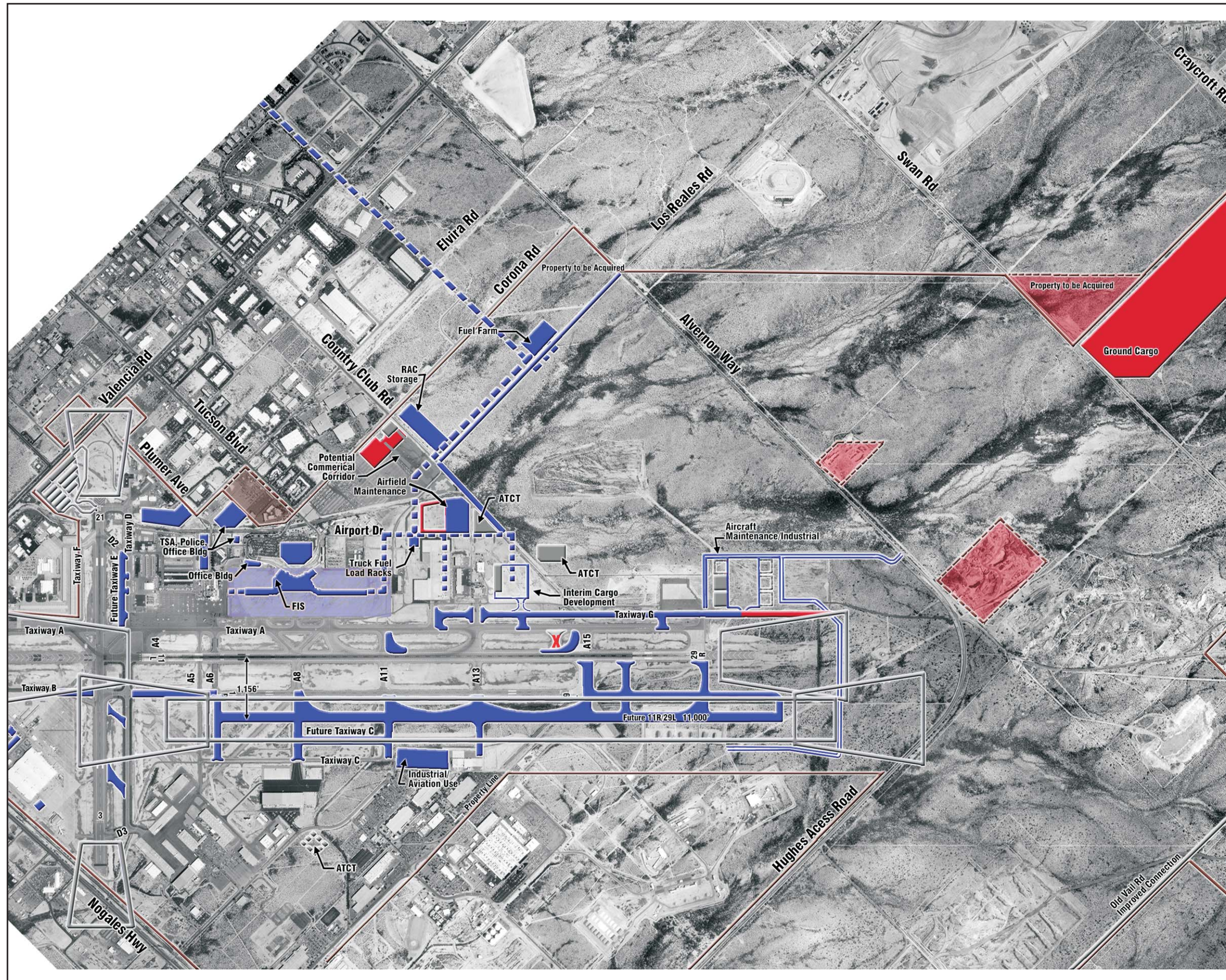
There are no Terminal projects in PDL 4. An expansion to the Park N Save lot is included for landside projects in this phase. This expansion will serve long-term parking needs as the Airports traffic grows over time.

The Airport has reserved space between Swan and Craycroft Roads for a potential ground cargo development. A project is included during this timeframe to provide the infrastructure and site utilities necessary for this site to be developed. An expansion to the Airport's Airfield Maintenance Facility and to the Aircraft Maintenance Area is included in this timeframe. PDL 4 includes the acquisition of three parcels to complete the Airport's ongoing land acquisition program. The remaining parcels, acquired during this planning demand level are a City of Tucson Parcel at Swan and Herman Roads, a parcel at Alvernon Way and Hermans Road, and a parcel at Alvernon Way and Hughes Access Road. **Exhibit 7-4** shows all of the projects that are planned for construction during PDL 4.

## 2.5 Beyond Planning Horizon

The need to plan for growth beyond the current 20-year planning horizon is based in part on the amount of land the Airport owns and to make the right decision now that will accommodate the longer term plans for the Airport. A number of projects have been identified through the Master Planning process that respond to the longer term needs at TIA. These projects are depicted in **Exhibit 7-5** and include a north parallel runway, future terminal expansion or the construction of a new mid-field terminal processor, expansion to Airport parking, a potential light rail spur serving the western airport industrial area, expansion of cargo facilities, and additional detention basins and property acquisitions.





## TUCSON INTERNATIONAL AIRPORT Master Plan Update

### Under Construction

Taxiway G – Phase IV  
Park N Save Expansion  
Ground Cargo Infrastructure  
Aircraft Maintenance Facility Expansion  
Maintenance Facility Expansion

### Impacted Facilities

### Land Acquisition

Parcel at Swan and Herman Roads (City of Tucson)  
Parcel at Alvernon Way and Hermans Rd. (Griggs/Amcron)  
Parcel at Alvernon Way and Hughes Access Rd. (Hughes/AAA)

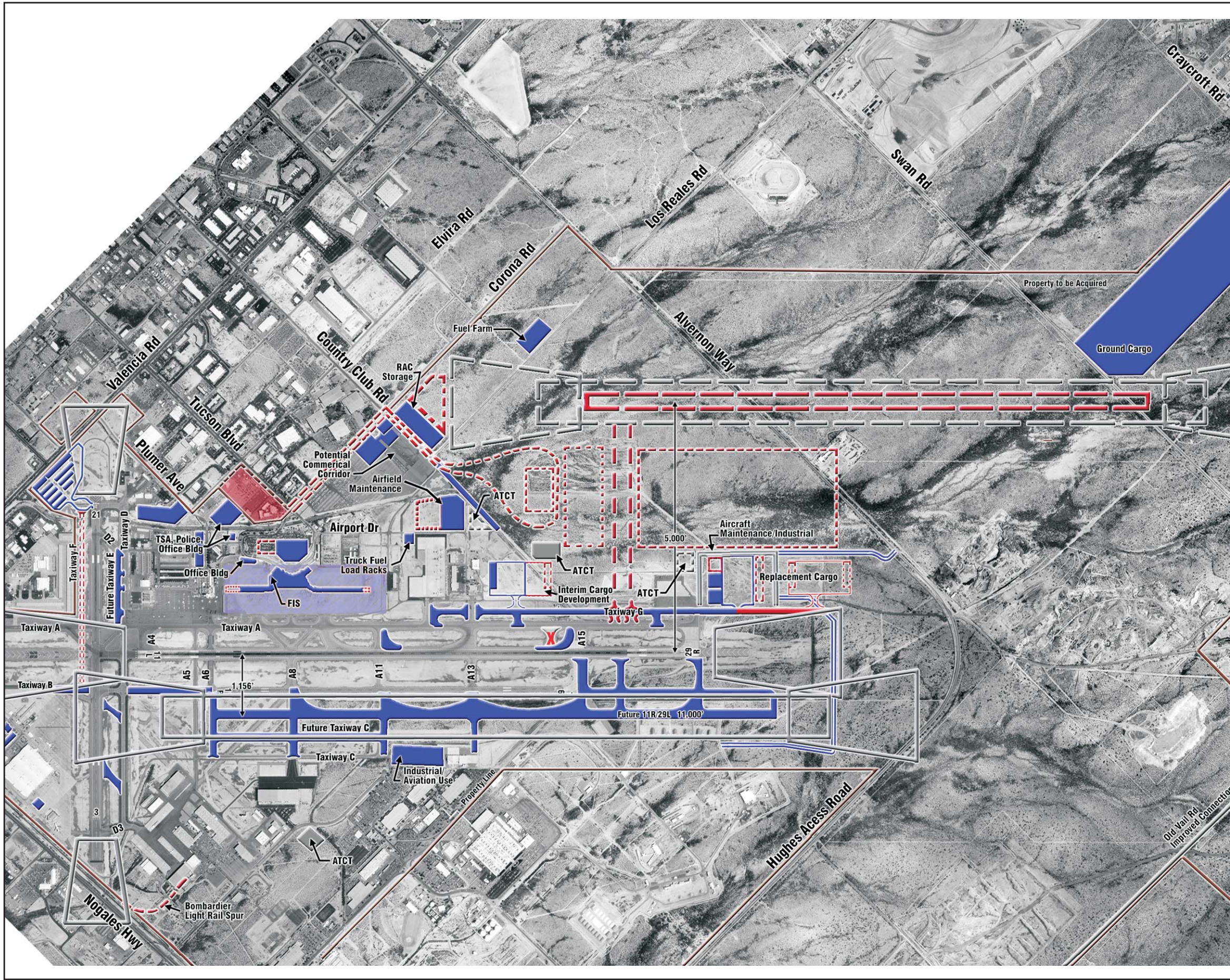
### Completed Projects

**PDL 4**  
Operations: 314,000  
Enplanements: 2.9 Million  
Range: 2018-2023



EXHIBIT  
7-4





## TUCSON INTERNATIONAL AIRPORT Master Plan Update

- Under Construction**
  - North Parallel Runway and associated Taxiways
  - Taxiway F
  - Existing Terminal Expansion or Potential Mid-Field Development
  - Parking Expansion
  - RAC Storage Area Expansion
  - Potential Light Rail Spur
  - Cargo Expansion
  - Airfield and Aircraft Maintenance Expansion
- Land Acquisition**
  - Tucson Blvd Properties
- Completed Projects**

## Conceptual Development Beyond Planning Horizon



EXHIBIT  
7-5



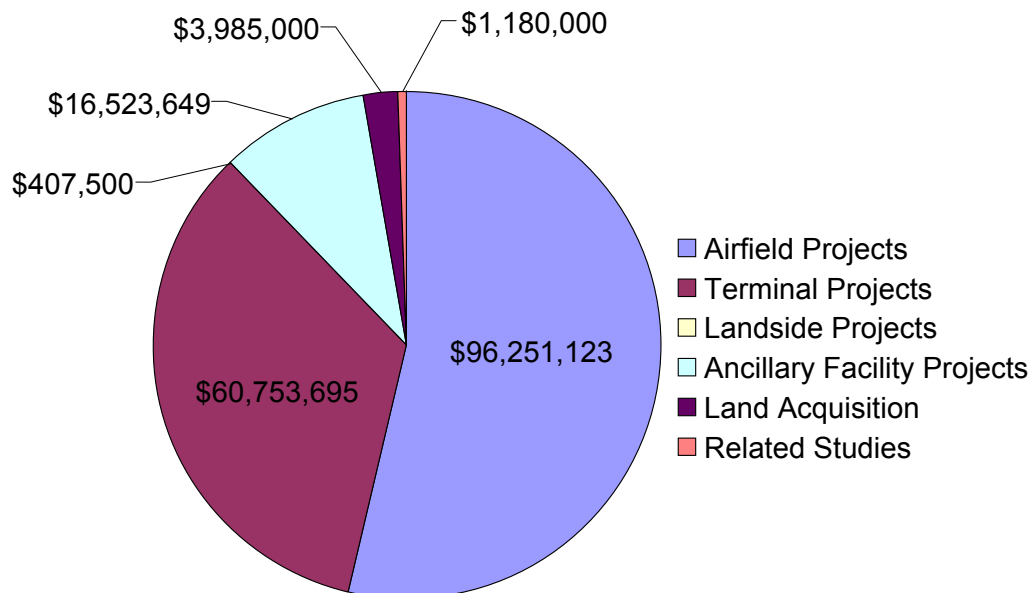
### 3. Financial Implementation Plan

#### 3.1. Funding Requirements

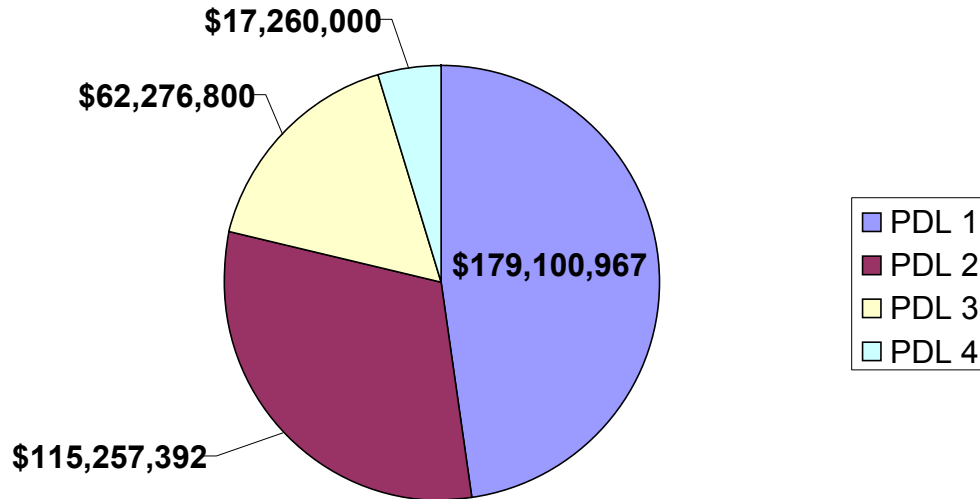
The financial plan prepared for this report focuses on the projects included in PDL 1, which are proposed for construction over the period 2004 to 2009. The projects in PDL 2, PDL 3 and PDL 4 will be implemented based on future air traffic demand and therefore the exact phasing of these projects is currently unknown. A future financial plan will be prepared when the phasing plan for these projects is more certain and more reasonable assumptions regarding available sources of funds can be made.

The total estimated cost for PDL 1 is \$179.1 million. The largest segment of these costs is for Airfield projects, which are estimated at \$96.3 million. The majority of this cost is accounted for by the \$62.6 million estimated for the design and construction of the Runway 11R-29L Relocation. After Airfield projects, the next largest segments of PDL 1 costs are Terminal projects at \$60.8 million. Ancillary Facility projects at \$16.5 million, Land Acquisition projects at \$4.0 million and \$1.2 million for Related Studies, and Landside projects at \$408,000. **Exhibit 7-6** breaks down the PDL 1 costs by facility group. The remaining Master Plan projects are grouped by PDL and estimated at \$115.3 million for PDL 2, \$62.3 million for PDL 3 and \$17.3 million for PDL 4. **Exhibit 7-7** breaks down the total program cost by PDL.

**Exhibit 7-6**  
**PDL 1 Costs by Facility Group**



## Exhibit 7-7 Costs by Planning Demand Level



### 3.2 Sources & Uses of Funds

The financial plan assumes the use of a number of different funds including federal AIP grants, ADOT grants, TAA Reserve Funds and Tenant Funding (see **Table 7-2**). The financial plan also assumes the application of PFC revenues, LOI proceeds and Airline Reserve Funds as direct offsets to the eligible portion of the annual debt service requirements on proposed future airport revenue bonds. A description of these sources of funds and their application in the financial plan is discussed below.

#### 3.2.1 Federal Grants

The Airport and Airway Trust Fund, which was established by the Airport and Airway Revenue Act of 1970, provides the revenues used to fund Airport Improvement Program ("AIP") projects. The AIP grant program, which is administered by the FAA, includes entitlement grants and discretionary grants. To receive an AIP Grant, an airport must have projects that are eligible for AIP funding under specific guidelines and receive FAA approval. Entitlement grants are allocated in accordance with a formula based on an airport's number of enplaned passengers. Discretionary grants are awarded based on the FAA's project ranking system, where the highest rated projects receive priority for discretionary grants. The FAA's ranking system gives highest priority to projects that preserve or enhance safety, security and capacity. The FAA will provide AIP grant funding to the TAA for up to approximately 91.0 percent of eligible project costs. The remaining

**Table 7 - 2**  
**Funding Requirements PDL 1**

<b>Estimated Project Costs</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>Total PDL 1</b>
Airfield Projects	\$0	\$1,822,700	\$18,189,042	\$4,236,189	\$14,777,428	\$57,225,764	\$96,251,123
Terminal Projects	\$753,695	\$60,000,000	\$0	\$0	\$0	\$0	\$60,753,695
Landside Projects	\$0	\$0	\$0	\$407,500	\$0	\$0	\$407,500
Ancillary Facility Projects	\$1,300,000	\$7,371,200	\$516,749	\$5,750,700	\$1,585,000	\$0	\$16,523,649
Land Acquisitions	\$0	\$760,000	\$2,025,000	\$0	\$0	\$1,200,000	\$3,985,000
Related Studies	\$0	\$430,000	\$0	\$0	\$750,000	\$0	\$1,180,000
<b>Total Estimated Project Costs</b>	<b>\$2,053,695</b>	<b>\$70,383,900</b>	<b>\$20,730,791</b>	<b>\$10,394,389</b>	<b>\$17,112,428</b>	<b>\$58,425,764</b>	<b>\$179,100,967</b>
<b>Project Funding</b>							
AIP Grants (1)	\$0	\$2,135,224	\$17,917,028	\$4,483,196	\$4,556,759	\$3,881,845	\$32,974,053
ADOT Grants (2)	\$0	\$1,039,338	\$1,823,581	\$1,070,127	\$1,305,334	\$1,271,959	\$6,510,339
TAA Reserve Funds (3)	\$1,300,000	\$7,209,338	\$990,182	\$4,841,067	\$730,334	\$311,959	\$15,382,880
Tenant Funding (4)	\$0	\$0	\$0	\$0	\$0	\$880,000	\$880,000
<b>Subtotal</b>	<b>\$1,300,000</b>	<b>\$10,383,900</b>	<b>\$20,730,791</b>	<b>\$10,394,389</b>	<b>\$6,592,428</b>	<b>\$6,345,764</b>	<b>\$55,747,272</b>
<b>Balance to be Bond Funded</b>	<b>\$753,695</b>	<b>\$60,000,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$10,520,000</b>	<b>\$52,080,000</b>	<b>\$123,353,695</b>
<b>Total Project Funding</b>	<b>\$2,053,695</b>	<b>\$70,383,900</b>	<b>\$20,730,791</b>	<b>\$10,394,389</b>	<b>\$17,112,428</b>	<b>\$58,425,764</b>	<b>\$179,100,967</b>

(1) Includes PDL 1 project costs identified by TAA for funding with AIP entitlement and discretionary grants. Assumes ADOT & TAA matching funds of 4.5% of total project cost.

(2) Includes PDL 1 project costs identified by TAA for funding with ADOT Grants. Assumes TAA matching funds of 10% of total project cost.

(3) Includes PDL 1 project costs identified by TAA for funding with TAA Reserve Funds and matching funds for AIP and ADOT grants.

(4) Includes PDL 1 project costs identified by TAA for Tenant funding.





9.0 percent of project costs are typically paid with local funds that include TAA Reserve Funds or state grants.

### 3.2.2 State Grants

Arizona Department of Transportation (“ADOT”), Aeronautics Division sets funds aside to contribute to the cost of funding certain eligible airport projects. If an airport project is selected for funding by ADOT they will fund up to 90.0 percent of the project’s cost with the airport required to fund the remaining 10.0 percent. The 10.0 percent local share is typically funded with TAA Reserve Funds. ADOT grants may also be used to pay for a portion of the local share of projects that receive AIP grant funding. Eligibility requirements for state grants are similar to those for FAA AIP grants. Currently ADOT has project funding tentatively budgeted through FY 2009. Between FY 2005-2009 the Airport expects to receive approximately \$6.5 million in ADOT funding for PDL 1 project costs.

### 3.2.3 TAA Reserve Funds

The Airport generates revenue through a combination of airline fees and charges, concession revenue, general aviation fees and other sources. After meeting the existing operating expense and debt service requirements, cash may remain from total Airport revenue. This remaining revenue, referred to as TAA Reserve Funds, may be used for certain airport purposes including the funding of capital improvement projects.

#### 3.2.3.1 Tenant Funding

There are certain projects in PDL 1, which may be used primarily by a single tenant, and the tenant may agree to finance a portion or all of the project’s cost. The TAA would still maintain ultimate control of the facility.

#### 3.2.3.2 Airport Revenue Bonds

The cost of PDL 1 will be funded on a pay-as-you-go basis with a combination of federal AIP grants, ADOT grants, TAA Reserve Funds and Tenant Funds. The project costs remaining after the application of these funds will be paid with the proceeds from the proposed issuance of future airport revenue bonds (“Future Bonds”). The Future Bonds would be secured by Airport Revenues and may be additionally secured by PFC revenues in a “double-barreled” approach. Under this approach PFC revenues may be used to provide back-up security for the bonds or to pay a portion of the debt service related to approved PFC projects.

### 3.2.4 PFC Funds

The Aviation Safety and Capacity Expansion Act of 1990 enables airports to impose a PFC of \$1.00, \$2.00 or \$3.00 on enplaning passengers. In 2000, the Wendall H. Ford Aviation Investment and Reform Act for the 21<sup>st</sup> Century ("AIR-21") allows a public agency to apply to the FAA to increase the PFC to \$4.00 or \$4.50. The amendment to the PFC Act limited the amount of other federal grants for which airport operators would be eligible if they chose to increase the applicable PFC. If an airport sponsor chooses to increase its PFC collection authority above \$3.00, its AIP entitlement grants will be reduced by 25.0 percent. The Airport currently has FAA authority to impose a \$3.00 PFC and collect up to \$101.2 million in PFC revenues.

#### 3.2.4.1 Letter of Intent ("LOI")

For projects that qualify, the FAA may issue an LOI that states the FAA's intent to reimburse the airport for eligible project costs and to provide these reimbursement payments on a predetermined schedule. An LOI is usually issued for large-scale, multi-year projects. The advantage of receiving an LOI is that project work may proceed without waiting for an AIP grant, and once awarded, an LOI application does not have to be renewed annually as do standard AIP grants. All projects submitted for LOI funding must be AIP eligible and have a positive benefit/cost ratio.

#### 3.2.4.2 Airline Reserve Funds

Revenue which is collected through the airline rates and fees to provide debt service coverage which is not required for other purposes may be used to fund airport project costs if approved by the airlines. We assumed the use of Airline Reserve Funds generated from the debt service coverage on the Future Bonds only would be applied to offset the cost of PDL 1.

## 4. **Financial Implementation Plan PDL 1**

Approximately \$55.75 million of PDL 1 project costs are anticipated for funding on a pay-as-you-go basis. See **Table 7-3**. Of this amount, \$33.0 million is expected from AIP entitlement and discretionary grants, \$15.4 million from TAA Reserve funds, \$6.5 million from ADOT funds and the remaining \$0.9 million is anticipated through Tenant Funding. Based on a total cost for PDL 1 of \$179.1 million, and the use of \$55.75 million of funds on a pay-as-you-go basis, there is a projected PDL 1 funding shortfall of approximately \$123.35 million. This anticipated shortfall will be funded with the proceeds from Future Bonds to be issued on a schedule to meet specific project funding requirements. It is

**Table 7 - 3**  
**Sources & Uses of Funds PDL 1**

	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>Total PDL 1</b>
<b>Sources of Funds</b>							
Balance from Previous Year	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Proceeds from Airport Revenue Bonds (1)	\$753,695	\$60,000,000	\$0	\$0	\$10,520,000	\$52,080,000	\$123,353,695
<u>Other Sources:</u>							
AIP Grants (2)	\$0	\$2,135,224	\$17,917,028	\$4,483,196	\$4,556,759	\$3,881,845	\$32,974,053
ADOT Grants (3)	\$0	\$1,039,338	\$1,823,581	\$1,070,127	\$1,305,334	\$1,271,959	\$6,510,339
TAA Reserve Funds (4)	\$1,300,000	\$7,209,338	\$990,182	\$4,841,067	\$730,334	\$311,959	\$15,382,880
Tenant Funding (5)	\$0	\$0	\$0	\$0	\$0	\$880,000	\$880,000
<b>Total Sources of Funds</b>	<b>\$2,053,695</b>	<b>\$70,383,900</b>	<b>\$20,730,791</b>	<b>\$10,394,389</b>	<b>\$17,112,428</b>	<b>\$58,425,764</b>	<b>\$179,100,967</b>
<b>Uses of Funds</b>							
Project Costs	\$2,053,695	\$70,383,900	\$20,730,791	\$10,394,389	\$17,112,428	\$58,425,764	\$179,100,967
Balance to Carry Forward	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Uses of Funds</b>	<b>\$2,053,695</b>	<b>\$70,383,900</b>	<b>\$20,730,791</b>	<b>\$10,394,389</b>	<b>\$17,112,428</b>	<b>\$58,425,764</b>	<b>\$179,100,967</b>

(1) Assumes the issuance of four airport revenue bonds in the amounts of approximately \$0.8 million, \$60.0 million, \$10.5 million and \$52.1 million.

(2) Includes PDL 1 project costs identified by TAA for funding with AIP entitlement and discretionary grants.

(3) Includes PDL 1 project costs identified by TAA for funding with ADOT Grants.

(4) Includes PDL 1 project costs identified by TAA for funding with TAA Reserve Funds.

(5) Includes PDL 1 project costs identified by TAA for Tenant funding.





anticipated that Future Bonds would be issued in 2004 to cover project costs of approximately \$0.8 million, a second Future Bond issue in 2005 to cover project costs of \$60.0 million, a third Future Bond issue in 2008 to cover project costs of \$10.5 million, and a fourth Future Bond issue in 2009 to cover \$52.1 million in project costs.

The debt service on the Future Bonds is anticipated to be paid with airport revenues collected in part through airline rates and fees, concession revenues and other airport revenues. It is also anticipated that the TAA will increase the level of its existing PFC from \$3.00 to \$4.50 by 2007 and that incremental PFC revenues will be used as a direct offset to an eligible portion of Future Bond debt service. The TAA also anticipates applying for and securing a FAA LOI to fund construction of the relocation of Runway 11R-29L. For the purposes of this report, we assumed an LOI grant in the total amount of approximately \$56.0 million to be paid in 10 equal annual payments of \$5.6 million from 2008 to 2017. These annual LOI payments would also be applied as a direct offset to the eligible portion of Future Bond debt service related to the relocation of Runway 11R-29L.

The financial plan also assumes the use of Airline Reserve Funds to offset the debt service related to the Future Bonds. The Airline Reserve Fund includes surplus airport revenues that are set aside to pay airport expenses but require airline Majority-in-Interest ("MII") approval to use. It was assumed for this analysis that Airline Reserve Funds would be applied as an offset to the Future Bond debt service beginning in 2008. The use of PFC revenues, LOI revenues and Airline Reserve Funds as a direct offset to Future Bond debt service will have the effect of lowering the total net expense that must be collected through airline rates and charges.

#### 4.1 Projected O & M Expenses and Operating Revenues

The financial impacts presented in this report do not forecast future Operating & Maintenance Expenses ("O&M Expenses") and future Operating Revenues. The net financial impact from these components was assumed to be minimal given the construction phasing and the estimated date of beneficial occupancy or beneficial use for the proposed facilities in PDL 1. In addition, the facilities that are likely to generate the largest share of O&M Expenses and Operating Revenues, such as the Concourse Expansion and Terminal Area Parking Garage, are still under design and important decisions such as the percentage of space allocated to concessions have not been finalized.



## **5. Financial Implementation Plan PDL 2 – PDL 4**

For the purposes of meeting the requirements of this report it was assumed that the costs of PDL 2, PDL 3 and PDL 4 would be financed through a combination of federal, state, tenant financing and Airport funds and the proceeds from additional future airport revenue bonds in a manner similar to that used to finance PDL 1. Federal and state funding will be sought for all eligible project costs and the balance of the funding requirement will be provided through private-party financing and/or the proceeds from airport revenue bonds.

The phasing for projects within PDL 2, PDL 3 and PDL 4 has not been completed since the actual construction scheduling for these projects will be based on the future demand for air service. Without a reliable annual project phasing plan determining future funding requirements is difficult especially in regard to federal and state grants.

## **6. Detailed Plan of Finance and Airline Financial Impacts**

The TAA has recently engaged the services of a financial consultant to prepare a detailed plan of finance for the master plan projects associated with PDL-1 and other near-term capital improvement projects. The conceptual financial implementation plan presented herein will be refined to include a thorough assessment of airline financial impacts and the most appropriate funding sources, based on current eligibility requirements. The TAA will work closely with the airlines, the FAA and ADOT to establish the most prudent funding strategy to meet the airport's near-term and long-term objectives.